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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/694,454	10/27/2003	Gerald H. Engelman	202-1141 (FGT 1851 PA)	2521
28549	7590	05/18/2005	EXAMINER	
KEVIN G. MIERZWA ARTZ & ARTZ, P.C. 28333 TELEGRAPH ROAD, SUITE 250 SOUTHFIELD, MI 48034			STONE, JENNIFER A	
			ART UNIT	PAPER NUMBER
			2636	

DATE MAILED: 05/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/694,454

Applicant(s)

ENGELMAN ET AL.

Examiner

Jennifer A. Stone

Art Unit

2636

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9-20 is/are allowed.
- 6) ☒ Claim(s) 1 and 3-6 is/are rejected.
- 7) ☒ Claim(s) 2, 7 and 8 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 11/20/03 & 12/10/03.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_.

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 5, and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Sugimoto et al. (US 6,292,753).

For claim 1, Sugimoto discloses a method of performing threat assessment within a vehicle comprising: detecting at least one object (col 2, lns 1-7); determining kinematics of the vehicle (col 4, lns 57-63); determining kinematics of said at least one object (col 4, lns 57-63); determining a brake threat number in response to said vehicle kinematics and said kinematics of said at least one object (col 6, lns 38-41); and determining a threat of said at least one object in response to said brake threat number (col 6, lns 41-48).

For claim 5, Sugimoto discloses determining kinematics of said vehicle and determining kinematics of said at least one object comprise determining yaw rate of the vehicle (col 5, lns 32-35; Fig. 2, S1).

For claim 6, the method of determining brake threat number comprises: determining a deceleration at zero range value; and determining a maximum vehicle deceleration value (col 8, lns 25-35 and 46-49).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sugimoto et al. (US 6,292,753), and further in view of Igaki et al. (US 2002/0101337).

Sugimoto does not determine a path of a vehicle or an object; however, Stopczynski discloses these features (col 8, lns 1-11). It would have been obvious to one of ordinary skill in the art, at the time the invention was made to determine path prediction to accurately predict the chances of a potential collision.

5. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sugimoto et al. (US 6,292,753), and further in view of Igaki et al. (US 2002/0101337).

Sugimoto discloses determining kinematics of said vehicle and determining kinematics of said at least one object comprising determining relative position and velocity of at least one object relative to the vehicle (col 4, lns 57-63). However, Sugimoto does not disclose determining acceleration of at least one object relative to the vehicle. Igaki, on the other hand, does disclose determining acceleration of at least one object relative to the vehicle (parag 0013). It would have been obvious to

determine acceleration of an object to accurately determine an instantaneous distance between a vehicle and an object.

***Allowable Subject Matter***

6. Claims 9-20 are allowed.
7. Claims 2, 7, and 8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Eckert et al. (US 6,473,681) discloses a system for performing threat assessment where when a high threat level is detected an automatic braking system is engaged.

Friederich et al. (US 6,624,747) discloses a system for preventing the collision of a vehicle with an object where the speeds and positions of the vehicle and object are calculated. In addition, the maximum braking deceleration to a relative speed having a zero value is calculated by an algorithm.

Takahashi (US 2003/0236605) discloses an object detection system where an average braking operation position is calculated (Fig. 5).

Mizutani (US 2004/0122573) discloses threat assessment system that determines a collision prediction level on the basis of a relative position between a vehicle and an obstacle.

Bai et al. (US 6,825,756) discloses assessing collision risk and determines whether steering operation to avoid a collision is required.


Maruko et al. (US 6,604,042) discloses braking force needed for an automatic braking operation based on object detection between a host vehicle and an object.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer A Stone whose telephone number is (571) 272.2976. The examiner can normally be reached on M-F from 8:00am to 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Hofsass, can be reached at (571) 272.2981. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jennifer Stone  
May 6, 2005

  
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